REMARKS

Claim 34 has been amended to remove SEQ ID NO:20.

I. Rejections Under 35 U.S.C.§112, first paragraph-written description

The Examiner has rejected Claims 34-37 under 35 U.S.C§112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner states that while the specification fails to disclose any variants of nucleotide sequences encoding canine IL-5, the invention as claimed encompasses any and all canine IL-5-like proteins since SEQ ID NO:20 is only 15 amino acids long.

Applicants note SEQ ID NO:20 has been removed from claim 34. Thus the claim is now drawn to nucleic acid molecules comprising nucleic acid sequences encoding the disclosed, full-length, canine IL-5 protein sequence.

II. Rejections Under 35 U.S.C. §112, first paragraph- enablement

The Examiner has rejected claim 34 under 35 U.S.C. §112, as failing to comply with the enablement requirement. Specifically the Examiner states that while the specification is enabling for the nucleic acid sequences of SEQ ID NO's 4, 7 and 9 which encode the amino acid sequences of SEQ ID NO:5 and 10, it does not reasonably provide enablement for any and all variants of SEQ ID NO's 4, 7 and 9. The Examiner thus concludes the enablement provided in the specification is not commensurate with the scope of the claims.

First, Applicants note claim 34 has been amended and is no longer drawn to nucleic acid molecules comprising nucleic acid sequences encoding SEQ ID NO:20. Thus the claims do not require the identification and characterization of any and all canine IL-5 like proteins having 87-89% variation flanking across the amino acid sequences of SEQ ID NO:20 as stated by the Examiner on page 5 of the rejection.

Next, Applicants believe the specification fully enables variants of SEQ ID NO's 4, 7 and 9, which encode proteins having the sequence of SEQ ID NO's 5 or 10. As noted by the Examiner, Applicants have clearly disclosed one set of nucleic acid molecules encoding the amino acid sequences of SEQ ID NO's 5 and 10, namely, SEQ ID NO's 4, 7 and 9. Applicants contend that it is well understood by those of ordinary skill in the art that due to redundancy in the genetic code, nucleotide changes within a codon do not necessarily alter which amino acid is coded for by that codon. Thus, changes at the nucleotide level may have no effect on the amino

acid sequence of the encoded protein. Therefore, while SEQ ID NO's 4, 7 and 9 encode SEQ ID NO's 5 and 10, there are a number of variants of SEQ ID NO's 4, 7 and 9 which also encode SEQ ID NO's 5 and 10. Since the redundancy of the genetic code (also known as the wobble hypothesis) is a basic and well understood tenet of biology, the creation of such variants is not beyond the ingenuity expected of one of ordinary skill in the art.

Furthermore, Applicants respectfully disagree with the Examiner's contention that it is highly unpredictable as to whether the claimed variants would encode proteins having IL-5 like activity. While the claims encompass variants of SEQ ID NO:4, 7 or 9, it is clear from the language of claim 34 that the amino acid sequences encoded by such variants would be identical to SEQ ID NO:5 or SEQ ID NO:10. In view of the fact that proteins identical in sequence to SEQ ID NO:5 and SEQ ID NO:10 would clearly have IL-5 activity of this, Applicants contend there would be no need for one of ordinary skill in the art to engage in undue experimentation in order exercise the claimed invention.

CONCLUSION

Applicants believe the claims are in condition for allowance and solicit such from the Examiner. The Examiner is invited to contact the undersigned should any issues remain.

Respectfully submitted,

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By: _____

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